

REMARKS

This amendment is responsive to the Office Action of June 8, 2009. Reconsideration and allowance of claims 1-15 and 17-20 are requested.

The Office Action

Claims 1-4, 8, 10, 12, 13, and 15 stand rejected under 35 U.S.C. § 103 over Allen (US 2002/0097239) in view of Gilligan (US 5,374,942).

Claim 5 stands rejected under 35 U.S.C. § 103 over Allen as modified by Gilligan as further modified by Dobbelaar (US 6,538,672).

Claim 6 stands rejected under 35 U.S.C. § 103 over Allen as modified by Gilligan as further modified by Gargi (US 6,915,489).

Claim 7 stands rejected under 35 U.S.C. § 103 over Allen in view of Gilligan further in view of Takabayashi (US 2003/0158476).

Claims 11 and 14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Allen as modified by Gilligan as further modified by Sezaki (US 6,078,313).

Claims 16, 19, and 20 stand rejected under 35 U.S.C. § 112, first paragraph.

Claims 16-20 do not stand rejected on art and are understood to contain allowable subject matter.

Summary and Background

There are a plurality of coordinate systems inherent in the present application and the prior art. In the embodiment in which the array of images is associated with three attributes, each attribute can be thought of as being associated with one of mutually orthogonal x-, y-, and z-axes as shown in Figure 3 of the present application. When scrolling along an x-axis, the subset of display images move horizontally along the display screen. When scrolling in a y- direction, the subset of images moves vertically along the display screen. When scrolling along the z-axis, images in successive ones of the other layers 5 in Figure 5 are displayed.

To scroll along the x-axis, one moves a manipulation unit or input device in an x- direction. When one wants to scroll along the y-axis, one moves the input device in a y- direction, orthogonal to the first. However, manipulation units or input devices, such as a mouse, touch screen, track ball, joy stick, or touch pad are

constrained by their construction to one plane. Such devices can readily indicate scrolling along the x- and/or y-axes, for example, by moving the input device in a corresponding x- and/or y- direction.

The difficulty arises as to how to use these two-dimensional manipulation units or input devices to cause scrolling along the orthogonal z-axis.

Gilligan, cited by the Examiner, indicates scrolling along the z-axis by rotating the mouse in circles.

By distinction, the present application describes moving the mouse or other input device along a diagonal or an imaginary z-axis between and in the plane of the x- and y- directions.

The Examiner asserts that it is a mere choice of design whether to move the mouse or other input device in circles or along a diagonal or imaginary z-axis to control scrolling along a z-axis. For the reasons set forth below in greater detail, the applicant disagrees.

The Present Amendment Should Be Entered

The present amendment should be entered placing the application in better condition for appeal by simplifying the issues on appeal.

The present amendment proposes to standardize the language of the claims such that one scrolls the subset of the images relative to an x-axis and/or a y-axis and a z-axis. This scrolling is achieved by moving the input device along an x- or first direction, and/or a y- or second direction and an imaginary z-axis or third direction.

Entry of this amendment does not require further search or consideration. This amendment does not alter the Examiner's and applicant's disagreement as to whether moving an input device along a third, diagonal direction or imaginary z-axis is a mere choice of design relative to moving the mouse or input device in circles. That issue still remains intact and is discussed below.

Further, this amendment amends "slider" to "slidebar" for consistency with the specification.

This amendment also cancels claim 16 and amends claim 19 to resolve the 35 U.S.C. § 112 rejection which reduces the issues on appeal.

For the reasons set forth above, it is submitted that the present amendment should be entered.

The Claims Distinguish Patentably
Over the References of Record

Claim 1 calls for scrolling along a z-axis by moving the manipulation unit along an imaginary z-axis which is positioned diagonally between and in a common plane with the x- and y- directions. By contrast, Gilligan moves the mouse in circles to scroll along the x-axis.

Moving in a diagonal direction is not a mere matter of choice relative to moving in circles. First, moving on a diagonal is more intuitive and easily understood by users. In common perspective drawings in which lines extending rearward or into the plane of the paper are depicted angling toward a vanishing point. When depicting three orthogonal coordinates in a planar presentation, the coordinate extending into the paper is frequently displayed as a sloped or diagonal line.

Moreover, with a diagonal line or an imaginary z-axis, the user intuitively knows which way to move the cursor along the line or to move the mouse in order to move deeper into or behind the plane of the paper or toward the viewer. By contrast, when rotating a mouse, it is not intuitively obvious to the user whether to rotate clockwise or counterclockwise in order to move toward or away from the viewer.

Further, a circular motion is a more complex motion and is more difficult to perform, particularly for users with limited manual dexterity or some physical disabilities. Erratic "attempted circular movement" could be interpreted as a series of x- and y- steps. Because the virtual z-axis includes a range of directions, as shown in Figure 6, very jerky or erratic motion which is substantially within the range and moves generally in the selected direction will be operative to scroll the images in the z- direction.

Because the presently claimed moving the manipulation unit along an imaginary z-axis positioned diagonally within a common plane with the x- and y- directions; whereas, Gilligan teaches moving the mouse in circles and because moving the mouse along a diagonal rather than in circles to connote movement into or out of the display claim is more intuitive, easier to differentiate between movement

into or out of the plane, is more usable by users with limited manual dexterity and is more handicap friendly, it is submitted that claim 1 is not a mere matter of choice of design and distinguishes patentably over the references of record.

Claim 8 calls for a method in which the user selects an additional attribute by scrolling along a z-axis by moving a manipulation unit substantially parallel to an imaginary z-axis, which x- direction, y- direction, and imaginary z-axis are disposed in a common plane with the imaginary z-axis disposed between the x- direction and the y- direction. For the reasons set forth above, it is submitted that moving along an imaginary z-axis between the x- and y- directions is superior to moving a mouse in circles, rather than a mere matter of choice of design.

Claim 18 calls for scrolling the displayed subset of images along a third dimension by moving an input device in a third direction with a range of directions disposed generally diagonally relative to first and second ranges of directions. Because moving an input device along such a third range of directions is superior to and not a mere choice of design relative to moving the input device in circles, it is submitted that claim 18 and claims 19 and 20 dependent therefrom distinguish patentably and unobviously over the references of record.

M.P.E.P. 2144.03

Pursuant to M.P.E.P 2144.03, the applicant traverses the Examiner's assertion regarding a mere matter of choice and put the Examiner to is proof to cite a reference showing that the presently claimed alleged "choice" is a known "choice" in the art.

35 U.S.C. § 112, First Paragraph

Claim 16 has been cancelled.

Claim 19 has been amended to correct a typographical error in which dimension was substituted inadvertently for direction.

Moreover, it is submitted that 'direction' connotes the direction which the mouse or input device moves (not page 7, lines 6, 14, 15, 22, 27, 28, 34, etc.). A mouse, being constrained to move on a surface can only move in directions in a single plane. Scrolling along an axis into or out of the plane of the viewing plane includes stepping to higher and lower layers of the images. The x-, y-, and z-axes in Figure 5

referenced by the Examiner connote axes along which the displayed set of images are scrolled. Although the axes extend in three mutually orthogonal directions in different planes in Figure 5, it is submitted that the motion of the mouse or other input device is limited to a single plane as illustrated in Figure 6.

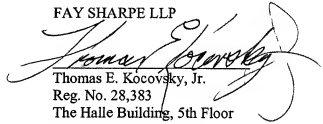
Accordingly, it is submitted that all claims comply with the requirements of 35 U.S.C. § 112.

CONCLUSION

For the reasons set forth above, it is submitted that claims 1-15 and 17-20 distinguish patentably and unobviously over the references of record. An early entry of the foregoing amendment and allowance of all claims is requested.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Thomas E. Kocovsky, Jr.", is written over the printed name and address.

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